

Abstract

Hydrolyzable and polymerizable silanes with low viscosity and their use

- 5 The invention relates to hydrolyzable and polymerizable, low-viscosity and flexible silanes of the general formula I



- 10 in which the radicals and indices have the following meaning:

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- B = a mono- to tetravalent, straight-chained or branched organic radical with at least one C=C double bond and 4 to 50 carbon atoms;
- 15 X = hydrogen, halogen, hydroxy, alkoxy, acyloxy, alkylcarbonyl; alkoxycarbonyl or NR''_2 ,
- R = alkyl, alkenyl, aryl, alkylaryl or arylalkyl;
- R' = alkylene, alkenylene, arylene, arylenealkylene or alkylenearylene in each case with 0 to 10 carbon atoms, these
- 20 radicals being able to be interrupted by oxygen and sulphur atoms or by amino groups;
- R'' = hydrogen, alkyl or aryl;
- U = an inorganically modified organic radical which contains a siloxane, carbosilane or carbosiloxane framework with at least
- 25 two (siloxane, carbosiloxane) or one (carbosilane) silicon or germanium atom and contains 1 to 15 C atoms as well as up to 5 additional heteroatoms from the group O, S, N;
- A = $C(O)O$, $OC(O)O$, $C(O)$, O, S, $C(O)NR''$, $OC(O)$, $NR''C(O)$;
- a = 1,2 or 3;
- 30 b = 0,1 or 2;
- a+b = 3;
- c = 1,2,3 or 4;
- d = 0 or 1.

In spite of their low viscosity and their flexibility the silanes do not evaporate out of the compositions formulated with them, and they are suitable alone or together with other components for the preparation of scratch-resistant coatings, filling, adhesion or sealing compounds, moulded bodies or embedding materials.

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